IN THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in this application:

1. (Currently amended) A container for holding a fluidic biological sample while undergoing nucleic acid amplification, the container ~~comprising~~consisting of:

a receiving portion having a first volume, the receiving portion being adapted to receive the biological sample therein; and

a reaction portion~~, the reaction portion comprising~~ consisting of a capillary tube that is closed at one end, wherein the capillary tube wall is about 0.1 mm thick, and the reaction portion being in fluidic communication with the receiving portion such that the biological sample placed in the receiving portion can travel to the reaction portion, the reaction portion having an internal volume not greater than a second volume, the second volume being less than the first volume and not greater than 1 milliliter, said reaction portion comprised of material having a thermal conductivity in the range from about 20 to about 35 in accordance with the formula: $\left(\frac{cal\ cm}{cm^2 s \text{degree } C}\right) x10^4$.

2. (Currently amended) A container as defined in claim 1 wherein the receiver portion ~~comprises~~ is formed from a plastic material.

3. (Currently amended) A container as defined in claim ~~1~~ 2 wherein the receiver portion ~~comprises a plastic material formed~~is in the shape of a funnel structure.

4. (Currently amended) A container for holding a fluidic biological sample while undergoing nucleic acid amplification, the container consisting of:

a receiving portion having a first volume, the receiving portion being adapted to receive the biological sample therein;

a reaction portion consisting of a capillary tube that is closed at one end,

wherein the capillary tube wall is about 0.1 mm thick, said reaction portion being in fluidic communication with the receiving portion such that the biological sample placed in the receiving portion can travel to the reaction portion, the reaction portion having an internal volume not greater than a second volume, the second volume being less than the first volume and not greater than 1 milliliter, said reaction portion comprised of material having a thermal conductivity in the range from about 20 to about 35 in accordance with the formula:

$\left(\frac{cal\ cm}{cm^2 s \text{degree } C}\right) x10^4$ ~~A container as defined in claim 1 further comprising; and~~

a stopper, the stopper being removably inserted into the receiving portion.

5. (Previously presented) A container as defined in claim 1 wherein the capillary tube is a glass capillary tube having an inner diameter of about 0.8 mm and an outer diameter of about 1.0 mm and the second volume is not greater than about 10 μℓ.

6. (Original) A container as defined in claim 1 wherein at least a portion of the reaction portion is transparent.

7 and 8. (Canceled).

9. (Currently amended) The container of claim ~~7~~ 1 wherein the second volume is between about .01 μℓ to about 100 μℓ.

10. (Currently amended) The container of claim ~~7~~ 1 wherein the reaction portion comprises a glass capillary tube having a 0.8 mm inner diameter and a 1.0 mm outer diameter.

11. (Currently amended) The container of claim 10 wherein the receiving portion ~~reservoir~~ is in the shape of ~~comprises~~ a funnel ~~shaped portion~~ and the capillary tube comprises a closed first end and a flared second end, the flared second end for receiving the funnel shaped portion of the receiving portion~~reservoir~~.

12. (Previously presented) The container of claim 10 wherein the closed first end comprises a flat tip.

13 and 14. (Canceled)

15. (Currently amended) The container of claim ~~7~~ 1 wherein the reaction portion has a volume to surface ratio of less than 0.25 mm.

16-18. (Cancelled).

19. (Previously presented) The container of claim 1 wherein the capillary tube has an inner diameter in the range from about 0.02 mm to about 0.1 mm.

20. (Previously presented) The container of claim 1 wherein the closed end is formed to optimize optical transmissibility for light having a wavelength of about 400 nm to about 800 nm.

21. (Currently amended) A container for rapidly heating and cooling a fluidic biological sample contained therein, the container ~~comprising~~consisting of:

a receiving portion defining a first internal volume, the receiving portion being adapted to receive the biological sample therein; ~~and~~

a reaction portion, ~~comprising~~ consisting of a capillary tube having a capillary tube wall of about 0.1 mm in thickness that is closed at one end, wherein the closed end is formed for optical transmissibility through the closed end, said reaction portion being in fluidic communication with the receiving portion such that the biological sample placed in the receiving portion can travel to the reaction portion, the reaction portion having an internal volume not greater than a second volume, the second volume being less than the first volume and not greater than 100 μℓ; and

a stopper for sealing the sample within the container.

22. (Canceled).